

REMARKS

Applicants have substituted a new Abstract, requested by the Examiner, to shorten the abstract of the disclosure to less than 150 words.

Applicants have cancelled claim 29 without prejudice or disclaimer. Applicants have amended claims 21, 24 to 28 and 30 to 34. Claims 35 to 46 have been added. Thus, claims 21 to 28 and 30 to 46 are currently pending.

The claims, particularly claims 21, 28 and 34, have been rewritten to clarify the description of the invention, in view of the Examiner's misunderstanding. The invention concerns adhering two resilient sheet elements having substantially the same structure together along an edge or gluing surface of each of the resilient sheet elements. The invention is not directed to forming a laminate.

Support for the amendments to claims 21, 28 and 34 is found at page 1, lines 8 to 10; page 2, lines 2 to 7; page 3, lines 2, 3 and 25; page 4, lines 23 to 26; page 6, lines 1 to 17; page 11, lines 6 to 11; page 13, lines 11 and 12; page 14, lines 1 to 4, 16 and 17; and the Figures, for example. Support for the amendments to claim 27 is found at page 3, lines 12 to 21; and page 13, lines 14 to 24, for example. Support for the amendment to claim 30 is found at page 3, lines 25 to 27; and page 5, lines 2 to 4, for example.

Support for new claims 35, 37, 39, 42 and 45 is found at page 10, line 26, to page 11, line 2, for example. Support for new claims 36, 38, 40, 43 and 46 is found at page 13, lines 14 to 24, for example. Support for new claims 37 and 44 is found at page 10, line 26, to page 11, line 2, and page 14, lines 16 and 17, for example. Support for new claim 41 is found in original claim 28, for example.

Claims 29 to 33 were objected to for depending on a non-elected claim. Claim 29 has been cancelled and claims 30 to 33 have been amended to depend from claim 28.

35 U.S.C § 102(b) Rejections

Claims 21 to 25, 27, 28, 29 and 31 to 33 have been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,073,408 to Winer et al. This rejection is respectfully traversed.

Winer et al. is directed to a method of installing rigid tiles, which bridge the irregularities and undulations of the subfloor resulting in an uneven decorative surface, as shown in Figure 1. See also, column 4, lines 41 to 45. Winer et al. overcomes this problem by laying up the tiles with the decorative surface facing the substrate and the machinable surface exposed, sanding or otherwise leveling the machinable surface, and then turning the tiles over to expose the leveled, decorative surfaces. See column 2, lines 15 to 27.

Rather than disclosing a gluing surface interposed between the first [major] surface and the second [major] surface, as suggested by the Examiner near the top of page 3 of the Office Action, column 9, lines 6 and 7, of Winer et al. teaches bonding a major surface of the reinforcement component 100 to a major surface of the decorative layer 92. As shown in Figure 12, which is a side elevation, reinforcement component 100 and decorative layer 92 are adjoined only at their major surfaces. Therefore, the gluing surfaces of Winer et al. are not interposed between the major surfaces as required by present claims 21 and 28, or the other independent claims, claims 34 and 37.

The Examiner's statement near the middle of page 3 of the Office Action that "the gluing surface [of Winer et al.] are not perpendicular to the first major surface" is correct,

but only because the gluing surfaces of Winer et al. are one of the major surfaces of the reinforcement component and one of the major surfaces of the decorative layer.

Therefore, for the reasons set forth in this paragraph and the preceding paragraph, all of the independent claims and claims dependent thereon are patentable over Winer et al.

Further, amended claim 21 requires the two elements to be resilient sheet elements having substantially the same structure. ASTM F141-01, a copy of which is enclosed for the Examiner's convenient reference, defines "resilient" to mean "tending or able to recover from strain or deformation caused especially by compressive stress." Winer et al. is directed to rigid tiles that do not deform. It is also directed to adhering a reinforcement component to a decorative layer and to a machinable layer, and to adhering a decorative layer to a machinable layer, none of which have a similar structure.

Claim 25 has been amended to require the surface covering to be a resilient sheet flooring." As indicated by ASTM F141-01, a resilient sheet flooring is different than resilient flooring tile, and therefore different than the rigid tile disclosed in Winer et al. Therefore, claim 21 is patentable over Winer et al. for this reason as well.

Amended claim 27 more clearly indicates that the seamless wear layer or seamless top coat covers the two elements and the seam formed by the adjacent gluing surfaces and adhesive. Winer et al. does not teach a seamless wear layer or top coat covering two elements having a substantially similar structure. Therefore, claim 27, as well as claims 36, 38, 40, 43 and 46, are patentable over Winer et al. for this reason.

Claim 28 has been amended to require the resilient floor covering to be in the form of a roll. Winer et al. is directed to tiles and not to a rolled resilient floor covering. Therefore, claim 28, as well as claims 34, 37, 41 and 44, is patentable over Winer et al.

Claim 29 has been cancelled.

35 U.S.C § 102(e) Rejections

Claims 28, 30 and 34 have been rejected as being anticipated by Pacione U.S. Patent No. 6,298,624. The Examiner takes the position in the carryover paragraph on pages 4 and 5 of the Office Action that Pacione discloses a resilient floor covering, a gluing surface interposed between the first [major] surface and the second [major] surface, the surface covering being in the form of a roll, the gluing surfaces being in a plane perpendicular to the axis of the roll, and the thickness of the seam being substantially no greater than the thickness of the elements.

The disclosure of Pacione is similar to the disclosure of Winer et al. in that each reference to an adhesive is directed to joining two horizontal major surfaces. Therefore, Pacione does not teach or suggest a gluing surface interposed between two major surfaces, as required by claims 28, 30 and 34, as well as the other independent claims. While reference number 33 in Figure 7 identifies a joint, there is no adhesive on the surface interposed between the two major surfaces.

Further, claim 28 claims a resilient floor covering and Pacione discloses a carpet. As indicated by ASTM F-141-01, resilient flooring does not include a textile wear surface. Therefore, claim 28 is patentable for this reason as well.

With respect to claims 30 and 34, column 10, line 24, of Pacione teaches unrolling the carpet piece 19, which is one of the two elements of the present claims. Pacione does not teach rolling the floor covering comprising the carpet pieces or



elements. In fact, Pacione teach installing the carpet pieces or elements on to the subfloor, therefore the Pacione floor covering with the seams cannot be rolled.

35 U.S.C. §103 Rejections

Claim 26 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Winer et al. in view of Pacione. As discussed previously neither Winer et al. nor Pacione teach or suggest a gluing surface interposed between two major surfaces. Further, neither Winer et al. nor Pacione teach or suggest a resilient flooring sheet, as required by amended claim 26. Therefore, the combination does not teach or suggest those elements.

The feature of a scarf joint having adhesive applied thereto, as required by new claims 35, 37, 39, 42 and 45, is not taught or suggested by Winer et al. or Pacione. Therefore, these claims should be allowed.

Applicants submit that all the claims are believed to be in a condition for allowance. Reconsideration is respectfully requested.

Respectfully submitted,

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Standard Terminology Relating to Resilient Floor Coverings¹

This standard is issued under the fixed designation F 141; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Referenced Documents

1.1 ASTM Standards:

F 1700 Specification for Solid Vinyl Floor Tile²

F 1859 Specification for Rubber Sheet Floor Covering Without Backing²

F 1860 Specification for Rubber Sheet Floor Covering With Backing²

2. Terminology

2.1 Terms and Definitions:

above-grade, *adj*—above the surface of the ground, *as related to floor location*, above a well-ventilated space with at least 18 in. between the bottom of the lowest horizontal structural member and any point of the ground.

abrasion, *n*—wearing, grinding, or rubbing away by friction.

across machine direction, *n*—the direction perpendicular to which a product moves through the manufacturing process.

asphalt tile, *n*—an obsolete floor surfacing unit composed of asphalt or hydrocarbon resins, or both, crysotile asbestos fibers, mineral fillers, and pigments.

below-grade, *adj*—below the surface of the ground, *as related to floor location*, part or all of the floor is below the ground.

concrete, *n*—a hard, strong material made by mixing a cementing material (commonly portland cement) and a mineral aggregate (as washed sand and gravel or broken rock) with sufficient water to cause the cement to set and bind the entire mass.

coefficient of friction—the ratio of the tangential force that is needed to start or maintain uniform relative motion between two contacting surfaces to the perpendicular force holding them in contact. (See DCOF and SCOF in 2.2 for clarification.)

cork tile, *n*—a floor surfacing unit made from natural cork shavings compressed and baked to be thoroughly and uniformly bonded together.

cushioned vinyl flooring, *n*—any vinyl sheet floor covering incorporating a foam layer as part of its construction.

dimensional stability, *n*—the ability of a resilient flooring to retain its original dimensions during the service life of the product.

Discussion—This property is usually measured by: (1) *temperature-induced dimensional change*—the alteration in linear dimensions as a result of exposure to a significant variation in temperature followed by a return to original conditions; or (2) *moisture-induced dimensional change*—the alteration in linear dimensions as a result of exposure to a significant variation in moisture. (1977)

embossed, *adj*—having a permanent multilevel surface produced by mechanical or chemical means.

flexibility, *n*—the ability to be bent, turned, or twisted without cracking, breaking or showing other permanent damage and with or without returning of itself to its former shape.

friction, *n*—resistance to the relative motion of one body sliding, rolling, or flowing over another with which it is in contact.

gouge, *n*—a groove or cavity in the flooring surface accompanied by material removal and penetration below the immediate flooring surface.

heat welded seam, *n*—a seam produced by grooving abutting edges of resilient flooring and filling said grooves with heated, fused, or melted material to provide a bond and seal. A glazing or top coating may be applied after the seam is trimmed.

Discussion—Excess welding material is trimmed flush with the finished flooring after cooling.

heterogeneous, *adj*—consisting of dissimilar ingredients, constituents or compositions.

heterogeneous rubber flooring, *n*—a rubber floor surfacing material consisting of layers of dissimilar compositions or colors, or both. See also Specification F 1860.

heterogeneous vinyl flooring, *n*—a vinyl floor surfacing material consisting of layers of dissimilar compositions or colors, or both.

homogenous rubber flooring, *n*—a rubber floor surfacing material, in sheet or tile form, that is of uniform structure and composition throughout. It usually consists of compounded natural or synthetic rubbers, or both, in combination with mineral fillers, pigments, and other additives. See Specification F 1859.

homogeneous vinyl flooring, *n*—a floor surfacing unit in sheet or tile form that is of uniform structure and composition

¹ This terminology is under the jurisdiction of ASTM Committee F06 on Resilient Floor Coverings and is the direct responsibility of Subcommittee F06.10 on Terminology.

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² *Annual Book of ASTM Standards*, Vol 15.04.

throughout, usually consisting of vinyl plastic resins, plasticizers, fillers, pigments and stabilizers.

injection molded flooring—a floor surfacing material made by driving or forcing a polymeric compound into a mold.

inlaid sheet flooring, *n*—a floor surfacing material in which the decorative pattern or design is formed by colored areas set in to the surface. The design so formed may or may not extend through to a backing.

lightweight concrete, *n*—concrete with a density of less than 115 lb/ft³ (1840 kg/m³).

linoleum, *n*—a surfacing material composed of a solidified mixture of linseed oil, pine rosin, fossil or other resins or rosins, or an equivalent oxidized oleoresinous binder, ground cork, wood flour, mineral fillers, and pigments, bonded to a fibrous or other suitable backing.

linoleum cement—the binder in linoleum consisting of a mixture of linseed oil, pine rosin, fossil or other resins or rosins, or an equivalent oxidized oleoresinous binder.

machine direction, *n*—the direction in which a product moves through the manufacturing process.

mar, *n*—a mark made on the flooring surface by the deposition of material from friction or rubbing of traffic bodies against the surface.

oleoresin, *n*—a plant product containing chiefly essential oil and resin.

on-grade—in contact with the ground, *as related to floor location*, in contact with the ground or with less than 18 in. of well-ventilated space between the bottom of the lowest horizontal structural member and any point of the ground.

patching compound, *n*—compound used to fill or smooth minor depressions or irregularities in a flooring surface.

plank, *n*—a form of resilient floor covering having an aspect ratio greater than 2:1.

polymeric poured (seamless) floors, *n*—a floor surfacing material composed of polymeric materials applied to the substrate in liquid form alone or in combination with mineral or plastic aggregates, desiccants, or fillers.

printed sheet vinyl flooring, *n*—a floor surfacing material which has a printed pattern and is protected with a wearlayer of transparent or translucent vinyl plastic. The wearlayer may also include a specialty performance top coating.

resilient, *adj*—tending or able to recover from strain or deformation caused especially by compressive stress.

resilient flooring, *n*—an organic floor surfacing material made in sheet or tile form or formed in place as a seamless material of which the wearing surface is non-textile. The resilient floor covering classification by common usage includes, but is not limited to asphalt, cork, linoleum, rubber, vinyl, vinyl composition, and polymeric poured seamless floors. Resilient in this sense is used as a commonly accepted term, but does not necessarily define a physical property. (1972)

rosin, *n*—a translucent amber to almost black brittle friable resin that is obtained by chemical means from the oleoresin or dead wood of pine trees or from tall oil.

rotovinyl, *n*—a vinyl flooring with a pattern produced by rotogravure printing.

rubber flooring, *n*—a floor surfacing material in sheet or tile form consisting of compounded natural or synthetic rubbers

or both in combination with mineral fillers, pigments, and other additives.

scratch, *n*—a shallow cut or narrow groove in the flooring surface. A line or furrow made in the flooring surface by rasping or rubbing with a pointed or jagged object.

scratching, *v*—a form of wear, in which a minute groove-like break in a flooring surface is made by a rubbing contact with a tool or particle, the total deformation being confined to the most immediate surface level. (1971)

scuff, *v*—a form of wear, in which a mark, gall, roughness or other damage is caused by the rubbing of traffic bodies against a flooring surface and may involve deposition of a foreign material onto the flooring surface. (1971)

sheet, resilient flooring, *n*—flexible resilient flooring, packaged in roll form, in which the length substantially exceeds the width.

DISCUSSION—Sheet flooring is usually manufactured in widths of 6 to 15 ft with rolls being up to 150 ft long to allow seamless installation in small rooms and minimize seams in large rooms.

slip resistance, *n*—the ability to counteract loss of traction.

solid vinyl flooring, *n*—See **homogeneous vinyl flooring**. (1974)

solid vinyl tile, *n*—a resilient tile flooring composed of binder, fillers and pigments compounded with suitable stabilizers and processing aids. The tile meets requirements of Specification F 1700. The binder consists of polymers and/or copolymers of vinyl chloride, other modifying resins, and plasticizers which comprise at least 34 % by weight of the finished tile. The polymers and copolymers of vinyl chloride comprise at least 60 % of the weight of the binder.

static coefficient of friction—the ratio of the tangential force that is needed to start uniform relative motion between two contacting surfaces to the perpendicular force holding them in contact.

subfloor, *n*—that structural layer intended to provide support for design loadings which may receive resilient floor coverings directly if the surface is appropriate or indirectly via an underlayment if its surface is not suitable. (1983)

tangential force, *n*—a force that acts on a moving body in the direction of a tangent to the curved path of the body.

terrazzo, *n*—a form of mosaic flooring made by embedding marble, onyx, granite, or glass chips in portland cement, polyacrylate modified portland cement, or resinous matrices. The terrazzo is poured in place, cured, ground, and then polished. Rustic terrazzo is a variation where, in lieu of grinding and polishing, the surface is washed with water or otherwise treated to expose the chips. Quartz, quartzite, and river bed aggregate can also be used.

tile, resilient flooring, *n*—resilient flooring which is packaged in flat pieces which can be installed as individual units.

DISCUSSION—Tiles are usually square, with sides of 9 to 24 in.; most commonly 12 by 12 in. They can also be long and narrow, such as 4 by 36 in. (sometimes called "plank").

traction, *n*—the adhesive friction of a body on a surface on which it moves.

underlayment, *n*—a material placed under resilient flooring.

or other finished flooring, to provide a suitable installation surface.

vinyl asbestos tile, *n*—an obsolete form of resilient tile composed of vinyl plastic binders, crysotile asbestos fibers, mineral fillers and pigments.

vinyl composition tile, *n*—a resilient floor covering composed of binder, fillers, and pigments. The binder shall consist of one or more resins of poly (vinyl chloride), or vinyl chloride copolymers, or both, compounded with suitable plasticizers and stabilizers. Other polymeric resins may be incorporated as part of the binder.

wear, *n*—the accumulative and integrative action of all the

deleterious mechanical influences encountered in use which tend to impair a material's serviceability. Such influences include, but are not limited to abrasion, scratching, gouging and scuffing. (1971)

wearlayer, *n*—the portion of a resilient floor covering that contains or protects the pattern and design exclusive of temporary finishes or maintenance coatings.

2.2 Abbreviations: Abbreviations:

COF—coefficient of friction.

DCOF—dynamic coefficient of friction.

SCOF—static coefficient of friction.

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